

ARS60-JDK04096

ARS60 SSI/Parallel

ABSOLUTE ENCODERS





Ordering information

| Туре | Part no. |
|----------------|----------|
| ARS60-JDK04096 | 1213432 |

Other models and accessories → www.sick.com/ARS60_SSI_Parallel

Illustration may differ



Detailed technical data

Performance

| Number of steps per revolution (max. resolution) | 4,096 (12 bit) |
|--|--|
| Error limits G | 0.035° (binary number of steps) 1) 0.046° (non-binary number of steps) |
| Repeatability standard deviation $\boldsymbol{\sigma_{r}}$ | 0.005° ²⁾ |

¹⁾ In accordance with DIN ISO 1319-1, position of the upper and lower error limit depends on the installation situation, specified value refers to a symmetrical position, i.e. deviation in upper and lower direction is the same.

Interfaces

| Communication interface | Parallel data world | |
|------------------------------------|---|--|
| Initialization time | 80 ms ¹⁾ | |
| SSI | | |
| Code type | BCD | |
| Code sequence parameter adjustable | CW (clockwise) increasing when viewing the clockwise rotating shaft Increasing, when turning the shaft For clockwise rotation, looking in direction "A" (see dimensional drawing) | |

 $^{^{1)}}$ Valid positional data can be read once this time has elapsed.

Electrical data

| Connection type | Cable, 22-wire, radial, 1.5 m | |
|---------------------------------------|--|--|
| Supply voltage | 10 32 V DC | |
| Reverse polarity protection | ✓ | |
| Short-circuit protection | ✓ | |
| MTTFd: mean time to dangerous failure | 300 years (EN ISO 13849-1) ¹⁾ | |

¹⁾ This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

 $^{^{2)}}$ In accordance with DIN ISO 55350-13; 68.3% of the measured values are inside the specified area.

Mechanical data

| Mechanical design | Through hollow shaft |
|---|--|
| Shaft diameter | 14 mm ¹⁾ |
| Housing material | Aluminum die cast |
| Start up torque | 2.2 Ncm |
| Operating torque | 1.6 Ncm |
| Permissible shaft movement, axial static/dynamic | ± 0.5 mm, ± 0.2 mm |
| Permissible shaft movement, radial static/dynamic | ± 0.3 mm, ± 0.1 mm |
| Bearing lifetime | 3.6 x 10 ⁹ revolutions |
| Angular acceleration | ≤ 500,000 rad/s² |
| Operating speed | ≤ 6,000 min ⁻¹ with shaft seal ≤ 10,000 min ⁻¹ without shaft seal |

 $^{^{1)}}$ Order collets for 6, 8, 10, and 12 mm and 1/4", 3/8", and 1/2" separately as accessories.

Ambient data

| EMC | According to EN 61000-6-2 and EN 61000-6-3 ¹⁾ |
|-------------------------------|---|
| Enclosure rating | IP64 (according to IEC 60529) |
| Permissible relative humidity | 90 % (condensation of the optical scanning not permitted) |
| Operating temperature range | -20 °C +85 °C |
| Storage temperature range | -40 °C +100 °C |
| Resistance to shocks | 50 g, 11 ms (according to EN 60068-2-27) |
| Resistance to vibration | 20 g, 10 Hz 2,000 Hz (according to EN 60068-2-6) |

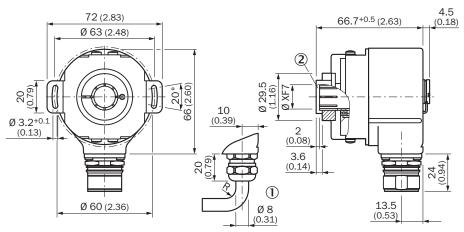
 $^{^{1)}\,\}mathrm{EMC}$ according to the standards quoted is achieved if shielded cables are used.

Classifications

| ECI@ss 5.0 | 27270502 |
|----------------|----------|
| ECI@ss 5.1.4 | 27270502 |
| ECI@ss 6.0 | 27270590 |
| ECI@ss 6.2 | 27270590 |
| ECI@ss 7.0 | 27270502 |
| ECI@ss 8.0 | 27270502 |
| ECI@ss 8.1 | 27270502 |
| ECI@ss 9.0 | 27270502 |
| ECI@ss 10.0 | 27270502 |
| ECI@ss 11.0 | 27270502 |
| ETIM 5.0 | EC001486 |
| ETIM 6.0 | EC001486 |
| ETIM 7.0 | EC001486 |
| UNSPSC 16.0901 | 41112113 |

Dimensional drawing (Dimensions in mm (inch))

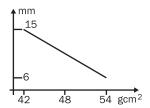
Through hollow shaft, radial male connector M12 and M23



General tolerances according to DIN ISO 2768-mk

- ① R = min. bending radius 40 mm
- ② Inseration depth of mounting shaft min. 15 mm

Maximum revolution range



Recommended accessories

Other models and accessories → www.sick.com/ARS60_SSI_Parallel

| | Brief description | Туре | Part no. |
|---------------|---|--------------|----------|
| Shaft adaptat | ion | | |
| | Collet for through hollow shaft, shaft diameter 6 mm, outer diameter 14 mm | SPZ-006-AD-D | 2029192 |
| | Collet for through hollow shaft, shaft diameter 8 mm, outer diameter 14 mm | SPZ-008-AD-D | 2029194 |
| | Collet for through hollow shaft, shaft diameter 10 mm, outer diameter 14 mm | SPZ-010-AD-D | 2029196 |
| | Collet for through hollow shaft, shaft diameter 12 mm, outer diameter 14 mm | SPZ-012-AD-D | 2029197 |
| | Collet for through hollow shaft, shaft diameter 1/2" (12.7 mm), outer diameter 14 mm | SPZ-1E2-AD-D | 2029198 |
| | Collet for through hollow shaft, shaft diameter 1/4" (6.35 mm), outer diameter 14 mm | SPZ-1E4-AD-D | 2029193 |
| | Collet for through hollow shaft, shaft diameter 3/8" (9.525 mm), outer diameter 14 mm | SPZ-3E8-AD-D | 2029195 |

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